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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,488	12/30/2004	Seiji Kato	1787.1006	5664
21171	7590	12/04/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PHAM, THOMAS K	
			ART UNIT	PAPER NUMBER
			2121	

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/519,488

Applicant(s)

KATO, SEIJI

Examiner

Thomas K. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**First Action on the Merits**

1. Claims 1-8 of U.S. Application 10/519,488 filed on 12/30/2004 are presented for examination.

**Quotations of U.S. Code Title 35**

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ541, 550-551 (CCPA 1969)" (MPEP p2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. The Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

#### **Information Disclosure Statement**

7. The information disclosure statement (IDS) submitted on 12/30/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### **Claim Rejections - 35 USC § 102**

8. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,311,421 ("Nomura").

#### **Regarding claim 1**

Nomura teaches the invention including a controlled-object model generation method for generating a model of a controlled object, the method comprising the steps of: acquiring time series data of manipulated variables given to a controlled object and time series data of

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controlled variables outputted by the controlled object in response thereto (see C 14 L 49-58, C 15 L 52-61, and C 35 L 16-25); and generating a model of the controlled object by acquiring time series data of values which is outputted from a transfer function assumed in advance when the acquired time series data of manipulated variables is inputted to the transfer function (see C 34 L 55 to C 35 L 15), and identifying one or more parameters of the transfer function so that an error between the time series data of output values and the acquired time series data of controlled variables corresponding thereto or a value derived from the error becomes optimum (see C 14 L 58 to C 15 L18, C 16 L 38-60 and C 33 L 33-61).

#### **Regarding claim 2**

Nomura teaches the invention including a controlled-object model generation program used for realization of a controlled-object model generation method, the program causing a computer to execute the steps of: acquiring time series data of manipulated variables given to a controlled object and time series data of controlled variables outputted by the controlled object in response thereto (see C 14 L 49-58, C 15 L 52-61, and C 35 L 16-25); and generating a model of the controlled object by acquiring time series data of values which is outputted from a transfer function assumed in advance when the acquired time series data of manipulated variables is inputted to the transfer function (see C 34 L 55 to C 35 L 15), and identifying one or more parameters of the transfer function so that an error between the time series data of output values and the acquired time series data of controlled variables corresponding thereto or a value derived from the error becomes optimum (see C 14 L 58 to C 15 L18, C 16 L 38-60 and C 33 L 33-61).

**Regarding claim 3**

Nomura teaches the invention including a controlled-object model generation method for generating a model of a controlled object, the method comprising the steps of: acquiring time series data of manipulated variables given to a controlled object and time series data of controlled variables outputted by the controlled object in response thereto (see C 14 L 49-58, C 15 L 52-61, and C 35 L 16-25); acquiring time series data of values which is outputted from each of transfer functions assumed in advance when the acquired time series data of manipulated variables is inputted to the transfer function (see C 34 L 55 to C 35 L 15), and identifying one or more parameters of the transfer function so that an error between the time series data of output values and the acquired time series data of controlled variables corresponding thereto or a value derived from the error becomes optimum (see C 14 L 58 to C 15 L 18, C 16 L 38-60 and C 33 L 33-61); and selecting, from the plurality of transfer functions having the identified parameters, the optimum one as a model of a controlled object based on the error acquired when the identification is completed or the value derived from the error (see C 5 L 1-6 and C 6 L 41-56).

**Regarding claim 4**

Nomura teaches the invention including a controlled-object model generation program used for realization of a controlled-object model generation method, the program causing a computer to execute the steps of: acquiring time series data of manipulated variables given to a controlled object and time series data of controlled variables outputted by the controlled object in response thereto (see C 14 L 49-58, C 15 L 52-61, and C 35 L 16-25); acquiring time series data of values which is outputted from each of transfer functions assumed in advance when the acquired time series data of manipulated variables is inputted to the transfer function (see C 34 L 55 to C 35 L

15), and identifying one or more parameters of the transfer function so that an error between the time series data of output values and the acquired time series data of controlled variables corresponding thereto or a value derived from the error becomes optimum (see C 14 L 58 to C 15 L18, C 16 L 38-60 and C 33 L 33-61); and selecting, from the plurality of transfer functions having the identified parameters, the optimum one as a model of a controlled object based on the error acquired when the identification is completed or the value derived from the error (see C 5 L 1-6 and C 6 L 41-56).

**Regarding claim 5**

Nomura teaches the invention including a control parameter adjustment method for adjusting control parameters of a controller, the method comprising the steps of: generating a model of a controlled object according to a controlled-object model generation process for generating a model of a controlled object (see C 6 L 13-40); in order to adjust a control algorithm of the controller, adjusting control parameters of the control algorithm (see C 6 L 41-47); and creating and outputting data showing relationship among a desired controlled variable, a manipulated variable and a controlled variable by simulating the state when the controller with the adjusted control parameters controls the controlled object with the use of the controlled-object model and the control algorithm (see C 15 L 49-61), wherein the predetermined controlled-object model generation process further comprises: acquiring time series data of manipulated variables given to a controlled object and time series data of controlled variables outputted by the controlled object in response thereto (see C 14 L 49-58, C 15 L 52-61, and C 35 L 16-25); and generating a model of the controlled object by acquiring time series data of values which is outputted from a transfer function assumed in advance when the acquired time series data of manipulated

variables is inputted to the transfer function (see C 34 L 55 to C 35 L 15), and identifying one or more parameters of the transfer function so that an error between the time series data of output values and the acquired time series data of controlled variables corresponding thereto or a value derived from the error becomes optimum (see C 14 L 58 to C 15 L 18, C 16 L 38-60 and C 33 L 33-61).

**Regarding claim 6**

Nomura teaches the invention including a control parameter adjustment program used for realization of a control parameter adjustment method, the program causing a computer to execute the steps of: acquiring time series data of manipulated variables given to a controlled object and time series data of controlled variables outputted by the controlled object in response thereto (see C 14 L 49-58, C 15 L 52-61, and C 35 L 16-25); generating a model of the controlled object by acquiring time series data of values which is outputted from a transfer function assumed in advance when the acquired time series data of manipulated variables is inputted to the transfer function (see C 34 L 55 to C 35 L 15), and identifying one or more parameters of the transfer function so that an error between the time series data of output values and the acquired time series data of controlled variables corresponding thereto or a value derived from the error becomes optimum (see C 14 L 58 to C 15 L 18, C 16 L 38-60 and C 33 L 33-61); in order to adjust a control algorithm of the controller, adjusting control parameters of the control algorithm (see C 6 L 41-47); and creating and outputting data showing relationship among a desired controlled variable, a manipulated variable and a controlled variable by simulating the state when the controller with the adjusted control parameters controls the controlled object with the use of the controlled-object model and the control algorithm (see C 15 L 49-61).



**Regarding claim 7**

Nomura teaches the invention including a control parameter adjustment method for adjusting control parameters of a controller, the method comprising the steps of: generating a model of a controlled object according to a controlled-object model generation process for generating a model of a controlled object (see C 6 L 13-40); in order to adjust a control algorithm of the controller, adjusting control parameters of the control algorithm (see C 6 L 41-47); and creating and outputting data showing relationship among a desired controlled variable, a manipulated variable and a controlled variable by simulating the state when the controller with the adjusted control parameters controls the controlled object with the use of the controlled-object model and the control algorithm (see C 15 L 49-61), wherein the controlled-object model generation process further comprises: acquiring time series data of manipulated variables given to a controlled object and time series data of controlled variables outputted by the controlled object in response thereto (see C 14 L 49-58, C 15 L 52-61, and C 35 L 16-25); acquiring time series data of values which is outputted from each of transfer functions assumed in advance when the acquired time series data of manipulated variables is inputted to the transfer function (see C 34 L 55 to C 35 L 15), and identifying one or more parameters of the transfer function so that an error between the time series data of output values and the acquired time series data of controlled variables corresponding thereto or a value derived from the error becomes optimum (see C 14 L 58 to C 15 L18, C 16 L 38-60 and C 33 L 33-61); and selecting, from the plurality of transfer functions having the identified parameters, the optimum one as a model of a controlled object based on the error acquired when the identification is completed or the value derived from the error (see C 5 L 1-6 and C 6 L 41-56).

**Regarding claim 8**

Nomura teaches the invention including a control parameter adjustment program used for realization of a control parameter adjustment method, the program causing a computer to execute the steps of: acquiring time series data of manipulated variables given to a controlled object and time series data of controlled variables outputted by the controlled object in response thereto (see C 14 L 49-58, C 15 L 52-61, and C 35 L 16-25); acquiring time series data of values which is outputted from each of transfer functions assumed in advance when the acquired time series data of manipulated variables is inputted to the transfer function (see C 34 L 55 to C 35 L 15), and identifying one or more parameters of the transfer function so that an error between the time series data of output values and the acquired time series data of controlled variables corresponding thereto or a value derived from the error becomes optimum (see C 14 L 58 to C 15 L 18, C 16 L 38-60 and C 33 L 33-61); selecting, from the plurality of transfer functions having the identified parameters, the optimum one as a model of a controlled object based on the error acquired when the identification is completed or the value derived from the error (see C 5 L 1-6 and C 6 L 41-56); in order to adjust a control algorithm of the controller, adjusting control parameters of the control algorithm (see C 6 L 41-47); and creating and outputting data showing relationship among a desired controlled variable, a manipulated variable and a controlled variable by simulating the state when the controller with the adjusted control parameters controls the controlled object with the use of the controlled-object model and the control algorithm (see C 15 L 49-61).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday - Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

Any response to this office action should be mailed to: **Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450**. Responses may also be faxed to the **official fax number (571) 273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Thomas Pham**  
*Patent Examiner*

A handwritten signature in cursive script, appearing to read 'Thy Pham', written in black ink.

November 22, 2006